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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,146	09/30/2003	Uwe Hering	NOR-1150	5608

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KEVIN G. ROONEY
WOOD, HERRON & EVANS, L.L.P.
2700 CAREW TOWER
CINCINNATI, OH 45202

EXAMINER

HOPKINS, ROBERT A

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 12/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

48

Office Action Summary	Application No. 10/675,146	Applicant(s) HERING, UWE	
	Examiner Robert A. Hopkins	Art Unit 1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-14, 16 and 17 is/are allowed.
- 6) ☒ Claim(s) 1-6 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,3, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Remillieux(4292053) taken together with Japanese reference(56-58513).

Remillieux teaches an apparatus comprising a crude gas chamber(4), a clean gas chamber(7), an air flow path between the clean gas chamber and the crude gas chamber, a first filter element(2) positioned in the air flow path, a first gas discharge device configured to direct a first gas stream with particles therein in the air flow path from the crude gas chamber through the first filter element into the clean gas chamber, a first shut off device(8a) configured to interrupt the first gas stream through the first filter element wherein the flow of the first gas stream is maintained to the clean gas chamber through another path(see figure 1), a second gas discharge device(13) configured to direct a second gas stream through the first filter element into the crude gas chamber. Remillieux is silent as to a first filter element moving device coupled to the first filter element and configured to move the first filter element in a manner which dislodges the particles therefrom. Japanese reference teaches an apparatus comprising a crude gas chamber, a clean gas chamber, an air flow path between the

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clean gas chamber and crude gas chamber, a first filter element positioned in the air flow path, a first gas discharge device configured to direct a first gas stream with particles therein in the air flow path from the crude gas chamber to through the first filter element into the clean gas chamber, a first shut off device configured to interrupt the first gas stream through the first filter element, a second gas discharge device configured to direct a second gas stream through the first filter element into the crude gas chamber, a first filter element moving device(10) coupled to the first filter element and configured to move the first filter element in a manner which dislodges the particles therefrom. It would have been obvious to someone of ordinary skill in the art at the time of the invention to provide a first filter element moving device coupled to the first filter element(2) of Remillieux in order to provide a simultaneous application of back pressure and vibration to increase the cleaning efficiency for cleaning the filter.

Remillieux further teaches a second filter element(2) arranged in parallel with the first filter element(see figure 1), a second shut off device(8b) configured to interrupt the first gas stream through the second filter element. Remillieux is silent as to a second filter element moving device coupled to the second filter element and configured to move the second filter element in a manner which dislodges particles therefrom. Japanese reference teaches an apparatus including a second filter element moving device(10) coupled to a second filter element and configured to move the first filter element in a manner which dislodges the particles therefrom. It would have been obvious to someone of ordinary skill in the art at the time of the invention to provide a

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second filter element moving device coupled to the second filter element(2) of Remillieux in order to provide a simultaneous application of back pressure and vibration to increase the cleaning efficiency for cleaning the filter.

Claims 2,5,6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Remillieux(4292053) taken together with Japanese reference(56-58513) in view of Gregg et al(5421845).

Remillieux taken together with Japanese reference teaches all of the limitations of claims 2 and 5 but is silent as wherein the second gas discharge device further comprises a movable nozzle element mounted for movement relative to the first filter element and a drive mechanism coupled with the movable nozzle element and configured to move the nozzle element as the second gas stream is directed to the first filter element. Gregg et al teaches a filtering apparatus including a filter chamber with a first filter element, and a gas discharge device for directing a gas stream through the filter element, wherein the gas discharge device further comprises a movable nozzle element(30) mounted for movement relative to the first filter element(24) and a drive mechanism(36) coupled with the movable nozzle element and configured to move the nozzle element as the second gas stream is directed to the first filter element. It would have been obvious to someone of ordinary skill in the art at the time of the invention to substitute a movable nozzle element with drive mechanism for each of the stationary gas discharge nozzles of Remillieux in order to effectively clean the entire diameter of each filter element of Remillieux. Gregg et al further teaches wherein the rotatable

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nozzle element further comprises an elongated arm with a gas channel therein and a plurality of gas outlet channels directed at the first filter element.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Remillieux(4292053) taken together with Japanese reference(56-58513) in view of Schmidt et al(3212643).

Remillieux taken together with Japanese reference teaches all of the limitations of claim 4 but is silent as to wherein the first filter element moving device further comprises a pneumatic cylinder capable of being intermittently charged with pressurized gas, and including a piston rod capable of reciprocating movement with the cylinder as a result of the cylinder being intermittently charged with the pressurized gas, and the reciprocating movement causing movement of the first filter element. Schmidt et al teaches a filtration chamber with at least one filter element, and a filter vibration device including a pneumatic cylinder(48) capable of being intermittently charged with pressurized gas, and including a piston rod(60) capable of reciprocating movement with the cylinder as a result of the cylinder being intermittently charged with pressurized gas. It would have been obvious to someone of ordinary skill in the art at the time of the invention to substitute a filter element moving device which further comprises a pneumatic cylinder capable of being intermittently charged with pressurized gas, and including a piston rod capable of reciprocating movement with the cylinder as a result of the cylinder being intermittently charged with pressurized gas for the standard vibration device of Japanese reference in order to provide a vibration

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device which is capable of intermittent operation and a maximum intensity of vibration to the filter element of Remillieux.

Allowable Subject Matter

Claims 7-14^{16,17}₄ are allowed.

Claims 7-9 include subject matter which was indicated as allowable in the previous office action.

Claim 10 recites "moving the cleaning gas stream between the first and second surface area portions to dislodge the powder from the first filter element". Koch fails to teach a step of moving the cleaning gas stream between the first and second surface area portions to dislodge the powder from the first filter element. It would not have been obvious to someone of ordinary skill in the art at the time of the invention to provide a step of moving the cleaning gas stream between the first and second surface area portions to dislodge the powder from the first filter element because Koch does not suggest such a modification. Claim 11 depends on claim 10 and hence is also allowed. Claims 16 and 17 depend on claim 10 and hence are also allowed.

Claim 12 recites "interrupting the flow of gas mixed with the powder through the first filter element while maintaining the flow of gas mixed with the powder through another path". Koch fails to teach a step of interrupting the flow of gas mixed with the powder through the first filter element while maintaining the flow of gas mixed with the powder through another path. Remillieux teaches a dust filtration apparatus including a step of interrupting the flow of gas mixed with dust through the first filter element

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while maintaining the flow of gas mixed with dust through another path, however Remillieux fails to teach a step of cleaning a filter element of powder filtered from a gas within a powder coating apparatus. Also, it would not have been obvious to someone of ordinary skill in the art at the time of the invention to provide a step of interrupting the flow of gas mixed with the powder in Koch through the first filter element while maintaining the flow of gas mixed with the powder through another path, because Koch only teaches a single filter element which spans a portion of a powder coating booth, and Remillieux teaches a plurality of filters, therefore including a plurality of filters would teach against the function of the Koch reference. Claim 13 depends on claim 12 and hence is also allowed.

Claim 14 recites "interrupting the flow of gas mixed with the powder through the first filter element while maintaining the flow of gas mixed with the powder through the second filter element". Koch fails to teach a step of interrupting the flow of gas mixed with the powder through the first filter element while maintaining the flow of gas mixed with the powder through a second filter element. Remillieux teaches a dust filtration apparatus including a step of interrupting the flow of gas mixed with dust through the first filter element while maintaining the flow of gas mixed with dust through a second filter element, however Remillieux fails to teach a step of cleaning a filter element of powder filtered from a gas within a powder coating apparatus. Also, it would not have been obvious to someone of ordinary skill in the art at the time of the invention to provide a step of interrupting the flow of gas mixed with the powder in Koch through the

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first filter element while maintaining the flow of gas mixed with the powder through a second filter element, because Koch only teaches a single filter element which spans a portion of a powder coating booth, and Remillieux teaches a plurality of filters, therefore including a plurality of filters would teach against the function of the Koch reference.

Response to Arguments

Applicant's arguments filed 11-22-05 have been fully considered but are moot in view of the new rejection.

Applicant's amendment necessitated the new grounds of rejection presented in this office action. Accordingly , THIS ACTION IS MADE FINAL. See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until the end of the THREE MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A. Hopkins whose telephone number is 571-

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272-1159. The examiner can normally be reached on Monday-Friday, 7am-4pm,
alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Duane Smith can be reached on 571-272-1166. The fax number for the
organization where this application or proceeding is assigned is 703-872-9306.


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RAH

December 13, 2005


ROBERT A. HOPKINS
PRIMARY EXAMINER
Art 1724